

**Amendments to the claims:**

This listing of claims replaces all prior versions, and listings, of claims in the application.

**Listing of claims:**

Claims 1-90 (cancelled).

91 (currently amended): A modified human TNF $\alpha$  molecule capable of raising neutralizing antibodies towards wild-type human TNF $\alpha$  following administration of said modified TNF $\alpha$  molecule to a human host, wherein at least one segment of the human TNF $\alpha$  molecule has been substituted by at least one peptide containing an immunodominant T cell epitope or a truncated form of said molecule containing an immunodominant T-cell epitope and one or both flanking regions of the human TNF $\alpha$  molecule comprising at least one TNF $\alpha$  B cell epitope, wherein the substitution is introduced in any one of the strands of the front  $\beta$ -sheet, in any one of the connecting loops or in any one of the B', I, or D strands of the back  $\beta$ -sheet, or in any one of the connecting loops and in any one of the B', I, or D strands of the back  $\beta$ -sheet, and which substitution leads to inactivation of the biological activity of human TNF $\alpha$  and which substitution essentially ensures preservation of the  $\beta$ -sheet structures of the B and G strands, wherein the inserted T cell epitope is promiscuous and immunogenic in a majority of human

HLA class II types, wherein the epitope is from Tetanus toxoid, and wherein said modified human TNF $\alpha$  molecule is selected from the group consisting of SEQ ID NO: 4, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 14, SEQ ID NO: 16, and SEQ ID NO: 20 wherein the inserted T cell epitope is promiscuous and immunogenic in a majority of human HLA class II types, wherein the epitope is from Tetanus toxoid, and wherein said modified human TNF $\alpha$  molecule is selected from the group consisting of SEQ ID NO: 4, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 14, SEQ ID NO: 16, and SEQ ID NO: 20.

- 92 (previously presented): The human TNF $\alpha$  according to claim 91, having the amino acid sequence shown in SEQ ID NO: 8.
- 93 (previously presented): The human TNF $\alpha$  according to claim 91, having the amino acid sequence shown in SEQ ID NO: 10.
- 94 (previously presented): The human TNF $\alpha$  molecule according to claim 91, having the amino acid sequence shown in SEQ ID NO: 4 or SEQ ID NO: 16.
- 95 (previously presented): The human TNF $\alpha$  according to claim 91, having the amino acid sequence shown in SEQ ID NO: 20.

96 (previously presented): The human TNF $\alpha$  according to claim 91, having the amino acid sequence shown in SEQ ID NO: 14.

97 (currently amended): Dimers, oligomers or multimers of ~~the human TNF $\alpha$  molecule according to claim 77~~ a modified human TNF $\alpha$  molecule capable of raising neutralizing antibodies towards wild-type human TNF $\alpha$  following administration of said modified TNF $\alpha$  molecule to a human host, wherein at least one segment of the human TNF $\alpha$  molecule has been substituted by at least one peptide containing an immunodominant T cell epitope or a truncated form of said molecule containing an immunodominant T-cell epitope and one or both flanking regions of the human TNF $\alpha$  molecule comprising at least one TNF $\alpha$  B cell epitope, wherein the substitution is introduced in any one of the strands of the front  $\beta$ -sheet, in any one of the connecting loops or in any one of the B', I, or D strands of the back  $\beta$ -sheet, or in any one of the connecting loops and in any one of the B', I, or D strands of the back  $\beta$ -sheet, and which substitution leads to inactivation of the biological activity of human TNF $\alpha$  and which substitution essentially ensures preservation of the  $\beta$ -sheet structures of the B and G strands.

Claims 98-132 (cancelled).